



F. H. STOLTZE LAND & LUMBER COMPANY

Lumber Manufacturers

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Established in 1912
Affiliations:



Charter Member

February 16, 2009

Senator Kelly Gebhardt, Chairman
Senator Bruce Tutvedt
Joint Select Committee on Reappraisal
P.O. Box 200500
Helena, MT 59620-0500

Fax (406) 444-4875

Re: FORESTLAND TAXATION ADVISORY COMMITTEE

Dear Senators Gebhardt and Tutvedt:

Thank you again for allowing us the opportunity to give testimony on our concerns with the reappraisal process of forestland in Montana. Attached is our recommendation for the seven member Forestland Taxation Advisory Committee per your request last Friday. Thanks again, if you have any questions please don't hesitate to call. 406-892-7027 (direct line).

Flathead Valley



Sincerely,

Chuck Roady

Vice President & General Manager
F.H. Stoltze Land & Lumber Company



Member Since 1960

Proposal

Montana Forestland Taxation Advisory Committee (Group)

Purpose: To help facilitate efficiency, credibility and acceptability of reappraisal efforts of taxation on private forest lands.

Membership (appointed by Governor):

Large non-industrial forest landowner - 1000 acres and greater (1)

Small non-industrial forest landowner - less than 1000 acres (1)

Large Industry forest landowner** (1)

Small Industry forest landowner** (1)

**Small Business Administration criteria to be used

Forest Economist - Private/Academic/Government (1)

County Commissioner (1)

Member at large (1) - Accountant type knowledge & experience of Forestland Taxation

Coordination of the Committee and incorporation of advisory recommendations would be the responsibility of the Governors Office via the Department of Revenue.

Mason, Bruce & Girard, Inc.

Natural Resource Consultants

www.masonbruce.com

February 18, 2009

Mr. Dennis Taylor
Manager, Property Tax
Plum Creek Timber Company
One Concourse Pkwy NE
Suite 755
Atlanta, GA 30328

Dear Mr. Taylor:

You have asked that we provide you with comments regarding appropriate capitalization rates (cap rates) for valuation of timberland for property taxation in Montana. Specifically, you have asked our opinion of the proposed use of a 6.28 percent cap rate for determination of timberland values. Mason, Bruce & Girard is a full service natural resource consulting firm headquartered in Portland, Oregon. Our services include timberland valuation and appraisal, financial analysis of timber and timberland, as well as assistance with due diligence efforts on timberland acquisitions and divestitures. Thus, we are well qualified to provide our opinion on current timberland markets.

In this letter, I will review the definition of capitalization rates, draw a distinction between capitalization rates, discount rates, and interest rates, review historical published cap rates for various classes of commercial real estate, and discuss a general rationale for setting cap rates for Montana timberland. I do not provide a specific recommendation for timberland cap rates. This would require additional time for analysis, but we would be happy to take on that assignment, if needed.

My general conclusions are as follows:

- Capitalization rates need to be distinguished from real discount rates often cited in the timberland investment literature and from interest rates charged as a cost of borrowing money. They are not the same thing and should not be interpreted as such.
- Cap rates for commercial real estate investments of various types have been falling until recently, but the current economic recession has reversed this trend. Cap rates across all property classes began rising in 2008 and are expected to continue to rise in 2009.
- Cap rates across many property types as of the end of 2008 ranged from 7 to 9+ percent.
- Published cap rates for timberland investment are not available. There are several reasons to believe they should be as high, if not higher, than cap rates for alternative commercial real estate, and also a few reasons why they might be lower.
- There are additional risk factors specific to timberland in Montana that would be reasonably expected to require cap rates higher than those for timberland in other U.S. regions. Like the rest of the Inland Northwest, Montana's forest products manufacturing capacity has shrunk to the point that timberlands in the State are considered a risky, fringe market.

1. What are Capitalization Rates?

A Capitalization Rate or "Cap Rate" is a ratio used to estimate the value of income producing properties. Put simply, the cap rate is the net operating income divided by the sales price, or value of a property, expressed as a percentage:

$$\text{Cap Rate} = \text{Net Operating Income} \div \text{Property Value}$$

Commercial real estate investors, lenders, and appraisers use a desired cap rate to estimate the purchase price for different types of income producing properties. Conversely, a market cap rate can be determined by evaluating the financial data of similar properties which have recently sold in a specific market. Cap rates can be based on first year income or normalized expected annual income.

The use of cap rates to value a property is in a sense an alternative approach to a more detailed discounted cash flow analysis. It is worth noting that, in our experience, capitalization rates are not typically used by buyers and sellers in timberland investment analysis. Timberland is a complex property type with very long term investment horizons and often relatively uneven annual incomes and costs. Thus, most market participants, as well as timberland appraisers, rely on a more detailed cash flow analysis rather than the simpler cap rate approach described above.

2. What is the difference between a "cap rate" and a "discount rate"?

It is important to distinguish between cap rates and discount rates, because they are not the same thing but can easily be confused. Both are important indicators of the investment characteristics and current market conditions in the real estate investment landscape. Market reports as well as transactions evidence indicate that the real discount rate for timberland investments in the U.S. has been in the 5 to 6 percent range (or even lower by some accounts) for the last couple of years.¹

As a side note, it is worth mentioning that the current economic climate is likely to lead to an increase over time in discount rates used for timberland investment. A presentation by Court Washburn, Chief Investment Officer with Hancock Timber Resource Group at the *Who Will Own the Forest Summit* in 2008 showed the historic trend in expected nominal rates of return for timberland from 1990 through 2008. His research indicates that the discount rate increased by about 2 percentage points (from about 10 percent to 12 percent) during the 1991/1992 recession. It would be reasonable to expect a similar response to the current recession although to date there has been no transactions evidence of this.

As I have said, a cap rate is a simple ratio of income to property value. A discount rate, which is used in cash flow analysis, is a compound interest rate used in cash flow analysis to account for the time value of money.

The cap rate and discount rate for a given property are not the same. To illustrate this, I have provided a simple example as **Table A** on the following page. This example consists of an income producing property that generates an equal annual income of \$1,000 per year. We assume a holding period of 10 years after which the property is sold. The cash flow at the top of the table shows the annual income and the discounted value of each year's income using an assumed discount rate of 6.0 percent. The net present value (NPV) of this 10-year cash flow is \$7,360. A reversion value is added to account for the property's value at the end of the 10 year period. This is calculated by capitalizing the expected future income using

¹ These are "real" discount rates, net of inflation. Comparable nominal discount rates are in the range of 8 - 9%.

a reversion cap rate², less selling cost. The calculated reversion value at the end of year 10 is \$9,694 but this value must be discounted to the present at 6 percent. The resulting NPV of the reversion value is \$5,413. Adding the two NPVs together, we get a total property value of \$12,773 (= \$7,360 + \$5,413).

The derived overall cap rate for this example is calculated in the box by dividing the year 1 income by the present value of the property. The resulting cap rate, R, is 7.83 percent (= \$1,000 / \$12,773).

Note that the cap rate is not the same as the discount rate in the example.

TABLE A

DISCOUNTED CASH FLOW ANALYSIS Even Annual Income		YEAR									
		1	2	3	4	5	6	7	8	9	10
NET OPERATING INCOME:		\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
PRESENT VALUE @OVERALL YIELD DISCOUNT FACTOR OF 6.00%		0.9434	0.8900	0.8396	0.7921	0.7473	0.7050	0.6651	0.6274	0.5919	0.5584
PRESENT VALUE OF THE PERIODIC INCOME		\$ 943	\$ 890	\$ 840	\$ 792	\$ 747	\$ 705	\$ 665	\$ 627	\$ 592	\$ 558
PRESENT VALUE OF THE PERIODIC INCOME	\$ 7,360										
ADD VALUE OF REVERSION											
11TH YR. NOI CAPPED @ \$ 1,000											
Reversion Cap. Rate 9.80%	\$ 10,204										
less selling costs @ 5.00%	-\$ 510										
Net Before tax Proceeds	\$ 9,694										
P.V. OF REVERSION @ YEAR 10 DISC. FACTOR 0.5584	\$ 5,413										
PRESENT VALUE OF THE CASH FLOWS	\$ 12,773										
PRESENT VALUE OF THE PROPERTY	\$ 12,773										

DERIVED OVERALL CAP RATE		
R=I/V	I=	\$ 1,000
	V=	\$ 12,773
THEREFORE R=		7.83%

Table B further illustrates the difference between cap rate and discount rate. In this example, the annual income is uneven – it is high in the early years and declines over time. This is a typical income pattern for a mature forest. In this example, the discount rate used in the cash flow analysis is again 6.0 percent. We calculated the cap rate based on the normalized (average) income, which is \$1,000 per year, the same as in the earlier example. In this case, however, the cap rate is 11.08 percent. The difference is the lower property valuation, which is the denominator in the cap rate calculation.

² The reversion cap rate is typically set to about 2% above the overall cap rate to account for anticipated appreciation in asset value.

TABLE B

DISCOUNTED CASH FLOW ANALYSIS Uneven Annual Income - Front-Loaded Using Normalized Annual Income		YEAR									
		1	2	3	4	5	6	7	8	9	10
NET OPERATING INCOME		\$ 2,500	\$ 2,500	\$ 2,500	\$ 1,500	\$ 700	\$ 100	\$ 50	\$ 50	\$ 50	\$ 50
PRESENT VALUE @OVERALL YIELD DISCOUNT FACTOR OF	6.00%	0.9434	0.8900	0.8396	0.7921	0.7473	0.7050	0.6651	0.6274	0.5919	0.5584
PRESENT VALUE OF THE PERIODIC INCOME		\$ 2,358	\$ 2,225	\$ 2,099	\$ 1,188	\$ 523	\$ 70	\$ 33	\$ 31	\$ 30	\$ 28
PRESENT VALUE OF THE PERIODIC INCOME	\$ 8,586										
ADD VALUE OF REVERSION											
11TH YR. NOI CAPPED @	\$ 50										
Reversion Cap. Rate	6.00%										
	\$ 833										
less selling costs @	5.00%										
	\$ 42										
Net Before tax											
Proceeds	\$ 792										
P.V. OF REVERSION @ YEAR 10 DISC. FACTOR	0.5584										
	\$ 442										
PRESENT VALUE OF THE CASH FLOWS	\$ 9,028										
PRESENT VALUE OF THE PROPERTY	\$ 9,028										

DERIVED OVERALL CAP RATE

R=I/V

I= \$ 1,000

V= \$ 9,028

THEREFORE R= 11.08%

In addition to illustrating the difference between cap rates and discount rates, examples A and B also point out the difficulty in using cap rates in forestry investments. The bottom line, again, is that a cap rate is a simple ratio of income to property value, whereas a discount rate is a compound interest rate used to account for the time value of money over long investment periods. They are two fundamentally different concepts.

3. It is not appropriate to use an interest rate as a proxy for a cap rate.

My understanding is that the Montana forestland cap rate originally came from the 15-year farm loan rate provided by Northwest Farm Credit Services. Since 1997, the cap rate has been based on the interest rate the IRS provides to the Federal Farm Credit Service through IRS Rule – Section 2032A. I am not familiar with the specifics of the IRS Rule and can't comment on that specifically as an appropriate interest rate. However, there are a couple of general arguments against basing a capitalization rate on an interest rate.

First, an interest rate represents the cost of borrowing money to finance a purchase. It represents only one component – the lower cost component – of the weighted cost of capital. This includes both the cost of debt and the cost of equity. Equity cost is always higher than debt cost because the equity owner is taking on more risk than the debt holder (who is always repaid first). For example, let's assume a timberland owner pays for timberland using equity (e.g. personal savings) for 50 percent of the purchase and finances the remaining 50 percent of a purchase by obtaining a loan at 6 percent. It is to be expected that the owner will want to receive significantly more than 6 percent as a return on his equity investment to account for the additional risk. If he expects, for example, to earn 10 percent return, the weighted cost of capital for the purchase is 8 percent. Using the debt cost (6 percent) as a proxy for the expected total return (8 percent) underestimates the true cost of capital, or return expectation. This will result in an over-estimate of property value.

Secondly, it seems likely that the interest rate specified by the IRS is a "safe rate," that is, an interest rate applicable to low risk investments. Thus it represents the lower end of the components of rate of return.

4. Okay, so what are the current market cap rates?

We are unaware of any published source of cap rates for timberland investments. As I mentioned previously, in our experience cap rates are not generally applied to timberland properties. However, there are published cap rates for other commercial real estate property types. Since these are presumably alternative investments, they provide a good starting point for discussion of timberland cap rates.

Integra Realty Resources is one source of capitalization rate information. Their *IRR-Viewpoint 2009* annual report³ provides historic and current cap rate data. Their year-end 2008 Cap Rates for various property types are summarized in the table below. Average rates range from a low of 6.95 for suburban multi-family (apartments) to 9.32 for suburban lodging.

2008 CAP RATE RANKS

2008 Rank	Property Type	2008 Low (%)	2008 High (%)	2008 Avg. (%)
1	Suburban Multifamily	5.5	8.8	6.95
2	Urban Multifamily	5.0	9.3	7.04
3	Regional Mall	6.0	9.0	7.40
4	Community Mall	6.5	9.0	7.71
5	Neighborhood Shop	7.0	9.3	7.89
6	Suburban Office	7.0	9.5	7.97
7	CBD Office	6.5	12.0	7.99
8	Office/Warehouse	6.5	9.5	7.99
9	Bulk	6.5	9.8	7.99
10	R&D	7.5	10.0	8.42
11	Manufacturing	7.5	10.5	8.53
12	CBD Lodging	7.0	12.0	9.01
13	Airport Lodging	7.0	12.0	9.30
14	Suburban Lodging	7.3	11.5	9.32

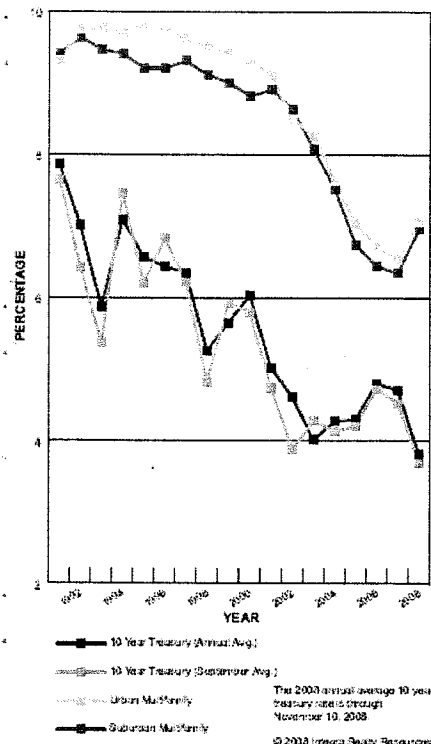
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Cap rates across many segments of the commercial real estate market have been falling for several years, until recently. Declining cap rates are a sign of strong markets that are viewed optimistically by investors. Segments with declining cap rates are attracting new investment dollars and property valuations are rising as investors compete for properties and accept lower returns to acquire them. Cap rates are also driven in part by the cost of debt. As debt capital becomes cheaper, cap rates tend to fall.

The declining trend in cap rates is illustrated in the following chart taken from the IRR report. Also shown in the chart is the declining cost of debt, represented here as Treasury rates. Although this particular chart is for apartments, the same general trends are also seen for other property types.

Another important take away from the graph is the recent reversal of the downward cap rate trend. The worsening economy, illiquidity brought on by the financial crisis, tightening debt markets, and their effects have drove cap rates up, according to IRR. This makes sense, weaker real estate markets and increased pessimism by investors drives cap rates up just as strong markets and investor optimism drives them down.

³ Available at www.irr.com. In addition to cap rates, the report also provides information on discount rates by commercial real estate market segment and geography.

CAP RATE TRENDS—APARTMENT

The 2009 IRR report indicates that cap rates are expected to rise further in 2009 across the entire spectrum of property types. Their survey showed overwhelming expectations for increases, as shown in the following table:

PROJECTED CAP RATE CHANGE

Property Type	Decline (%)	Increase (%)	Stable (%)
CBD Office	0.0	94.4	5.6
Suburban Office	0.0	96.3	3.7
Regional Mall	0.0	90.4	9.6
Community Mall	0.0	98.2	1.8
Neighborhood Strip	1.8	96.4	1.8
Manufacturing	0.0	94.3	5.7
Bulk	0.0	86.5	13.5
Office/Warehouse	1.8	89.1	9.1
R&D	1.9	92.3	5.8
Urban Multifamily	0.0	81.5	18.5
Suburban Multifamily	0.0	81.8	18.2
CBD Lodging	0.0	87.8	12.2
Suburban Lodging	0.0	88.0	12.0
Airport Lodging	0.0	88.0	12.0
AVERAGE	0.4	90.4	9.2

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How does timberland relate to this matrix of property types? There are several reasons to expect that cap rates for timberland should be higher relative to those for many other commercial property types. Some of these reasons are as follows:

- Timberland is not widely traded. It is considered illiquid with relatively high barriers to entrance and exit. It is not difficult or prohibitively expensive to buy an office or apartment building and if things don't work out, sell it again in a year or two. Buying and selling timberland is a much more complex process and market participants are relatively few in number.
- Timberland is inherently more complex and not well-understood. Property managers need specialized knowledge that is not widely available. There are numerous operational risks ranging from fires and pest infestations to restrictive and changing regulations and social / environmental expectations.
- There are significant market risks, especially in a "fringe" market. In highly competitive wood baskets such as the Pacific Northwest west of the Cascades and much of the U.S. South, the market risk is minimized because of the size of the markets for primary log products and diversity of markets for timber products. However, markets are much more sparse and tentative in areas such as the Inland Northwest, including western Montana, where the existing mill infrastructure is struggling to survive. There are some areas now (central Washington, NE Oregon, for example) where significant timberland investments teeter on the edge of viability and loss of a single mill could severely reduce property values.

All of these factors add risk that would argue for higher capitalization rates. On the other hand, there are also some offsetting factors that may reduce cap rates. For instance:

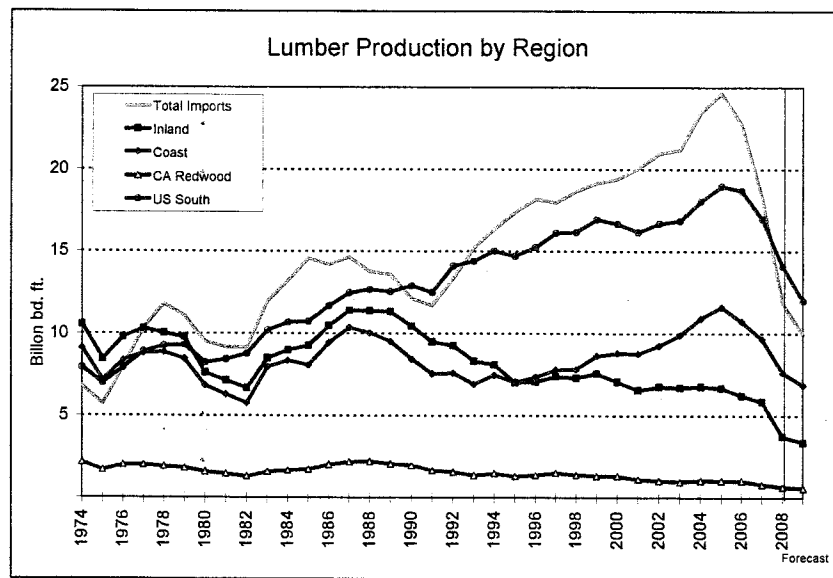
- Timberland is widely recognized as a portfolio diversifier because its returns have been uncorrelated with other assets, primarily the stock market. Some of the investment universe favors timberland for this reason.
- Timberland is also viewed as an inflation hedge because its pricing, as well as its products, has appreciated at least at the rate of inflation.
- Timberland seems to be viewed currently as a safe haven given the turmoil in other markets in part because it is a real asset and has performed well historically.
- Timberland's biological growth is a characteristic that is attractive to investors. At least to some extent, owners can forego timber harvest during down cycles of the market and not only store their inventory on the stump, but add to it through biological growth. As a long-lived biological resource, timber generally does not 'spoil.'

There is a need to emphasize that for timberland, as for all real estate, it's "location – location – location." Cap rates (and discount rates) should be expected to vary considerably by geography. Montana, along with other parts of the Inland Northwest, the Lake States, and parts of the Northeast, have not historically been hot markets for investment grade timberland. So cap rates or discount rates derived from transactions in other regions should not be assumed to be equal. I recently talked to a TIMO representative about expected market conditions over the next few years and he indicated that "fringe" areas will be viewed very skeptically by investors given current market conditions. In our opinion, this perspective should be taken into account when considering valuation-related questions in Montana.

Here is some perspective on the economic conditions the forest products industry faces:

- The U.S. housing market, already in the doldrums in 2007, took a severe turn for the worse in 2008. After showing some signs of bottoming in mid-summer, the Census Bureau reported a sharp drop in housing starts in November from a downwardly-revised October rate. The 625,000 annual rate of construction reported for November is 24.8 percent below the September rate, 47.0 percent below the November 2007 rate, and 70.9 percent below the rate in November of 2005 at the peak of the building boom. In fact, the starts reported for November were lower than any rate reported in the 59 year history of the series. Sales of new homes were off 35.3 percent from November, 2007 and the median sales price was off 11.5 percent.
- The months of housing inventory on the market climbed to more than 11 months in November, a high not seen since the recession of the early 1980's. With an increasing number of foreclosures set to hit the market during 2009 – an estimated 2 million homes – the inventory backlog will almost certainly get worse before it gets better.
- Housing start forecasts for the next few years are uniformly pessimistic. Global Insight's housing starts projection for 2009 dips to 660,000 units. The Western Wood Products Association's (WWPA) October 2008 forecast pegged 2008 housing starts at 993,000 units and expected the same level of starts again in 2009. The Association reported that western mills are experiencing the largest downturn in lumber demand ever recorded as a result of the unprecedented decline in home building. The downward trend is forecast to continue in 2009 before beginning a recovery in 2010. Wachovia's Economic Outlook forecasts housing starts at 630,000 units in 2009 and 800,000 in 2010. The most recent housing forecast by the National Association of Realtors anticipates housing starts dropping a further 29 percent to 646,000 units in 2009 before recovering to 948,000 units in 2010.
- Plummeting housing starts dropped lumber production in the Western states to an 11-year low in 2007, according to final figures released by WWPA. The 16.3 billion board feet of lumber produced at Western sawmills was the lowest since 1996. Production in Oregon was off 12.2% while output was down 7.2% in Washington. Preliminary indications are that 2008 production in the West declined to 13.4 Bbf, an additional drop of 17% over 2007. The WWPA forecasts 2009 to be even gloomier, with western lumber production declining to 11.8 Bbf.

The following chart shows the impact the housing sector collapse has had on lumber production by region. The Inland region wood products market has been in steady decline for about 20 years while other regions have expanded capacity. In 2008, the Inland West, which includes Montana, has taken a very hard hit; 2008 brought a further 36 percent decline in lumber production in the region. The current poor market conditions have had a devastating effect on inland timber producers and landowners and exacerbated the long-term decline.



These trends have got to have some effect on timberland valuations and, in our opinion, should be considered in the development of tax appraisal processes in Montana.

Please call if you have any questions about our analysis.

Sincerely,

Digitally signed
by Roger Lord
Date: 2009.02.18
11:14:10 -08'00'

Roger Lord
Forest Economist